

# **Region 6 NPDES Program and Permit Quality Review**

## **Arkansas**

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## Executive Summary

U.S. Environmental Protection Agency (EPA) Region 6's National Pollutant Discharge Elimination System (NPDES) Program and Permit Quality Review (PQR) for Arkansas found that permits issued in the state were generally of good quality and overall consistent with federal requirements. However, we found municipal permits lacked influent monitoring requirements for certain conventional pollutants, some permits reviewed lacked water quality-based effluent limitations (WQBELs) where the water quality assessment indicated that the discharge would cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standards (WQS), and application requirements for municipal facilities were not met.

The PQR examined 20 permits for discharges in Arkansas along with one general permit issued by the Arkansas Division of Environmental Quality (DEQ) and certain DEQ permitting resources. The PQR also focused on several national and regional priority areas including:

- Permit Controls for Nutrients in Non-Total Maximum Daily Load (TMDL) Waters,
- Effectiveness of POTW NPDES Permits with Food Processor Contributions,
- Small Municipal Separate Storm Sewer System (MS4) Permit Requirements,
- Implementation of Water Quality Standards for Minerals,
- Implementation of CWA Section 316(b) for Steam Electric Power Plant Permits

Arkansas permits 782 individual facilities. As of August 2020, 80 percent of Arkansas's permits are current.

The PQR recognizes the state and region-specific challenges faced by the state of Arkansas, including understanding how to implement and refer to national guidance documents that may have remained in draft form and are considered at the federal level to be rescinded. DEQ also continues to develop a new Antidegradation Implementation Methodology and update its Continuing Planning Process (CPP) document.

Although the permits reviewed commonly conformed to national requirements, we identified several concerns, including the lack of influent monitoring for carbonaceous biochemical oxygen demand (CBOD) and total suspended solids (TSS) which creates an inability to demonstrate permittees' compliance with applicable federal treatment standards. Further, certain permits lacked WQBELs despite the water quality assessment indicating positive reasonable potential (RP). We believe these concerns can be best resolved through DEQ working with EPA to better understand the necessity for the influent monitoring requirements and consistent interpretation of 40 CFR 122.44(d)(1)(i) regarding establishing WQBELs. Based on this PQR, EPA is recommending modifications to DEQ's fact sheet template and certain permit conditions related to influent and effluent monitoring and WQBELs development. In addition to the items listed above, the report provides an overview of the Arkansas NPDES permitting program and identifies specific areas where EPA and DEQ can work together to continue to strengthen permit language and documentation in state issued NPDES permits.

The state of Arkansas reviewed and provided comments on the draft PQR report on May 16, 2022. The state agreed with many of the draft PQR's findings and recommendations and committed to take action to address many of the proposed action items. Several of these actions, including development of an implementation methodology for the state's antidegradation policy and an update to the state's NPDES form 1 to require reporting of influent sampling data are already underway. Additional responses from the state to address the Action Items from this report are noted in Tables 9 and 10.

## I. PQR BACKGROUND

The NPDES PQRs are an evaluation of a select set of NPDES permits to determine whether permits are developed in a manner consistent with applicable requirements established in the Clean Water Act (CWA) and NPDES regulations. Through this review mechanism, EPA promotes national consistency, and identifies successes in implementation of the NPDES program as well as opportunities for improvement in the development of NPDES permits.

During this review, the evaluation team proposed action items to improve Arkansas's NPDES permit program. The proposed action items are identified within sections III, IV, and V of this report and are divided into two categories to identify the priority that should be placed on each item and facilitate discussions between regions and states.

- **Essential Actions** - Proposed "Essential" action items address noncompliance with respect to a federal regulation. EPA has provided the citation for each Essential action item. The permitting authority must address these action items in order to comply with federal regulations.
- **Recommended Actions** - Proposed "Recommended" action items are recommendations to increase the effectiveness of the state's or Region's NPDES permit program.

The Essential actions are used to augment the existing list of "follow up actions" currently tracked by EPA Headquarters on an annual basis and are reviewed during subsequent PQRs.

EPA's review team, consisting of ten Region 6 staff, one Headquarters staff, and one EPA contractor staff person, conducted a review of the Arkansas NPDES permitting program. The PQR was conducted remotely, meaning a review of materials was conducted off-site, for materials DEQ was able to provide electronically. Further, the remote PQR included interviews and discussions conducted via conference calls during August 24–28, 2020. An opening interview was held on August 24, 2020 and a closing meeting on August 28, 2020.

The Arkansas PQR included reviews of core permit components and national and regional topic areas, as well as discussions between the PQR review team and Arkansas staff addressing their program status and permit issuance process. The permit reviews focused on core permit quality and included a review of the permit application, permit, fact sheet, and any correspondence, reports or documents that provide the basis for the development of the permit conditions and related administrative process. The PQR also included conversations between EPA and the state program status, the permitting process, responsibilities, organization, staffing, and program challenges the state is experiencing.

A total of 20 permits were reviewed as part of the PQR. Of these, 10 permits were reviewed for the core review, 9 permits were reviewed for national topic areas, and 8 permits were reviewed for regional topic areas. Some permits were reviewed for both the core review and one or more topic area reviews. Permits were selected based on issue date and the review categories that they fulfilled.

## Core Review

The core permit review involved the evaluation of selected permits and supporting materials using basic NPDES program criteria. Reviewers completed the core review by examining selected permits and supporting documentation, assessing these materials using standard PQR tools, and talking with permit writers regarding the permit development process. The core review focused on the *Central Tenets of the NPDES Permitting Program*<sup>1</sup> to evaluate the Arkansas NPDES program. Core topic area permit reviews are conducted to evaluate similar issues or types of permits in all states.

## Topic Area Reviews

The national topics reviewed in the Arkansas NPDES program were: Permit Controls for Nutrients in Non-TMDL Waters, Small Municipal Separate Storm Sewer System (MS4) Permit Requirements, and Effectiveness of Publicly-owned Treatment Works (POTW) NPDES Permits with Food Processor Contributions.

Regional topic area reviews target regionally specific permit types or aspects of permits. The regional topic areas selected by EPA Region 6 included: Implementation of CWA Section 316(b) for Steam Electric Power Plant Permits and Implementation of WQS for Minerals. These reviews provide important information to Arkansas, EPA Region 6, EPA HQs, and the public on specific program areas.

## II. STATE PROGRAM BACKGROUND

### A. Program Structure

The Arkansas Department of Energy and Environment (ADEE) is comprised of five entities: Division of Environmental Quality (DEQ), Pollution Control and Ecology Commission, Oil and Gas Commission, Geological Survey, and the Liquefied Petroleum Gas Board. The DEQ administers the NPDES program. EPA granted Arkansas authority to administer the NPDES program on November 1, 1986. DEQ's main office is in North Little Rock. Staff in the main office are responsible for the administration of permitting, compliance, enforcement, and WQS and assessment programs. DEQ operates 11 field offices in Batesville, El Dorado, Fayetteville, Fort Smith, Hope, Hot Springs, Jonesboro, Mountain Home, Russellville, White Hall, and West Memphis. Regional offices staff compliance inspectors.

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<sup>1</sup> <https://www.epa.gov/npdes/central-tenets-npdes-permitting-program>

Figure 1. Arkansas Department of Energy and Environment Organizational Chart



DEQ employs 7.25 full-time equivalent (FTE) NPDES permit writers and reports that each drafts 22 permits per year, on average. Other staff who support NPDES permitting include one pretreatment specialist, one administrative support staff person, two supervisors, one senior manager, 0.75 FTE from the water quality modeling team, and 0.25 FTE as an associate director. In addition, permit writers collaborate with other program staff during the permit development process. Permit writers join compliance inspectors on facility inspections and conduct site visits (non-compliance inspections) prior to permit development. Further, permit writers consult with staff in the Planning Branch with every permit developed, to confer on applicable WQS, waterbody impairments, and Total Maximum Daily Loads (TMDLs). Also, enforcement staff conduct a compliance review of the facility and permit prior to permit development and issuance.

DEQ develops new permit writers through attendance at EPA's NPDES Permit Writers' Course, review of NPDES-related training materials, and receipt of feedback provided during peer review of new permit writers' draft permits. In addition, permit writers have available the *Training Manual for NPDES Permitting in Arkansas*, the CPP document, and Arkansas Pollution Control and Ecology Commission's (APC&EC) Rule 2 (WQS regulations) and Regulation 6 (NPDES regulations) as additional resources during permit development. Arkansas's CPP describes the main procedures of the state's water quality management programs and permits.

DEQ uses the Water Quality Monitoring Database

([http://www.adeq.state.ar.us/techsvs/env\\_multi\\_lab/water\\_quality\\_station.aspx](http://www.adeq.state.ar.us/techsvs/env_multi_lab/water_quality_station.aspx)) to identify ambient water quality data. In addition, DEQ retrieves waterbody assessment and impairment status information by reviewing the state's 303(d) List

(<http://www.adeq.state.ar.us/water/planning/integrated/303d/list.aspx>) and identifies applicable TMDLs and associated wasteload allocations (WLAs) by reviewing the state's TMDL

website (<http://www.adeg.state.ar.us/water/planning/integrated/tmdl/>). DEQ uses EPA's Integrated Compliance Information System (ICIS)-NPDES for permit compliance data. Further, permit writers use standard spreadsheets to calculate reasonable potential (RP), including unique spreadsheets evaluating data for priority pollutant scans (PPS), total residual chlorine, and pH. Permit writers may employ a water balance model to evaluate mixing zones for most pollutants, except for dissolved oxygen (DO), where permit writers will use the Streeter-Phelps model. In addition to the various spreadsheets and models used during permit development, DEQ permit writers use templates for development of NPDES permits, accompanying permit fact sheets, public notices, and permit correspondence.

To ensure NPDES permits undergo appropriate quality assurance (QA) and quality control (QC) reviews, all DEQ NPDES permits are peer reviewed, administratively proofread, and reviewed in full by the supervisor, senior manager, and associate director. DEQ does not use QA checklists; however, there are workflow steps checklists in DEQ's ePortal system which serve as a routing checklist during processing. The QA/QC routing is standardized through the ePortal system. DEQ strives to provide EPA Region 6 with a draft permit for their review within four to five months of receiving the permit application, but acknowledged that unique scenarios may extend the permit development timeframe.

DEQ uses various document management software programs to house permit development documentation. DEQ's Facility and Permit Summary Permit Data System (PDS) (<https://www.adeg.state.ar.us/home/pdssql/pds.aspx>) is an online data system that allows the public to search and access information for specific facilities or permits. In addition, permit development documentation is housed in DEQ's Zylab and on DEQ internal network drives. Permit-related correspondence is maintained in the PDS and Zylab. DEQ's monitoring and reporting information is housed in NetDMR (Network Discharge Monitoring Report), EPA's Enforcement and Compliance History Online (ECHO) website, ICIS-NPDES, and the PDS. Permit compliance records are housed online in the PDS.

## **B. Universe and Permit Issuance**

As of August 2020, DEQ is responsible for administering permit coverage for 782 individual permits, including 116 major permits (78 POTWs and 38 non-POTWs), 664 non-major individual permits (296 POTWs and 368 non-POTWs), and two individual stormwater permits. In addition, DEQ administers 12 general permit categories (nine non-stormwater and three stormwater) covering 3,921 dischargers.

According to responses DEQ provided, 154 individual permits are administratively continued (40 major and 114 non-major), meaning that the DEQ NPDES program is 20 percent backlogged.

DEQ indicated that significant industries in the state include agriculture, mining and mineral extraction, power plants, timber processing, and steel manufacturing.

**Table 1. General Permits Coverage**

NPDES Permit Number	Permit Name/Category	Number of Permittees
ARG550000	Individual Treatment	277
ARG750000	Car/Truck Wash	12
ARG160000	Sanitary Landfill	36
ARG500000	Aggregate Facilities	46
ARG790000	Groundwater Cleanup	5
ARG640000	Water Treatment	120
ARG870000	Pesticides	Unknown
ARG250000	Non-Contact Cooling Water, Cooling Tower Blowdown	14
ARG670000	Hydrostatic Testing	23
ARR040000	Small MS4	63
ARR000000	Industrial Stormwater	2044
ARR150000	Construction Stormwater	1281

### C. State-Specific Challenges

DEQ sought guidance regarding continued use of EPA’s memos and guidance documents that have not been finalized (i.e., those still considered “draft”), based on Executive Order 13891 (*Promoting the Rule of Law Through Improved Agency Guidance Documents*). Arkansas proposed they may reference the memo/guidance of interest and acknowledge it as still appropriate guidance (e.g., EPA’s 1996 memo, *Interim Guidance for Performance-Based Reductions of NPDES Permit Monitoring Frequencies*).

### D. Current State Initiatives

DEQ developed a draft 2020 CPP and draft Antidegradation Implementation Methods for implementation of the state’s antidegradation policy contained in chapter 2 of APC&EC Rule 2. These two documents were still in the public participation process at the time of the PQR. DEQ noted that implementation of the two documents will ensure its NPDES permits are more transparent and defensible.

### III. CORE REVIEW FINDINGS

#### A. Basic Facility Information and Permit Application

##### 1. Facility Information

###### *Background*

Basic facility information is necessary to properly establish permit conditions. For example, information regarding facility type, location, processes, and other factors is required by NPDES permit application regulations (40 CFR 122.21). This information is essential for developing technically sound, complete, clear, and enforceable permits. Similarly, fact sheets must include a description of the type of facility or activity subject to a draft permit.

###### *Program Strengths*

The permits reviewed include appropriate signatures, permit issuance, expiration and effective dates, along with specific authorization to discharge language on the cover page. Permits also clearly identify the facility location as well as the physical location of outfalls. In addition, permits describe the outfall relative to the receiving waterbody. The permits and fact sheets reviewed generally include a basic description of the facility and the treatment process.

###### *Areas for Improvement*

The review team did not identify any areas for improvement in this core area.

###### *Action Items*

Essential	<ul style="list-style-type: none"> <li>•The PQR did not identify any essential action items for this section.</li> </ul>
Recommended	<ul style="list-style-type: none"> <li>•The PQR did not identify any recommended action items for this section.</li> </ul>

##### 2. Permit Application Requirements

###### *Background and Process*

Federal regulations at 40 CFR 122.21 and 122.22 specify application requirements for permittees seeking NPDES permits. Although federal forms are available, authorized states are also permitted to use their own forms provided they include all information required by the federal regulations. This portion of the review assesses whether appropriate, complete, and timely application information was received by the state and used in permit development.

DEQ uses a state form, DEQ Form 1, which includes general application information that is requested by federal forms as well as other information the state requires (e.g., driving directions to facility, neighboring state information, and backup power generation information). DEQ uses EPA's series 2 of application forms (i.e., 2A, 2C, 2E, 2F, etc.) in conjunction with the DEQ Form 1. Furthermore, DEQ requires major facilities to submit the PPS form as part of the application package. Other state forms address specific trust funds that are established to ensure financial coverage in case of site abandonment.

Permit writers conduct outreach to help permittees understand required forms and specific application requirements. Engineers, as well as enforcement staff, call facility contacts to provide outreach early during the application process to ensure applicants know what is required of them. DEQ sends permittees an initial application reminder letter six months and a follow-up reminder letter three months ahead of the application due date (i.e., one year and again at nine months ahead of the permit expiration date). Arkansas has made improvements in the pre-application process and has seen improvements in metrics (e.g., timely and complete applications received). For example, DEQ provides applicants with the permit writers' contact information with the application reminder letter and requires permit writers and inspectors to conduct joint site inspections prior to commencing permit development. Early coordination supports an efficient application and permit development process.

DEQ currently assigns one of the lead engineers to review applications for administrative completeness prior to the assignment to the permit writer, providing consistency in the level of review. Following permit assignment, the assigned engineer/permit writer reviews the application for technical completeness. Arkansas issues a letter designating completeness for the administrative review but does not issue a second letter documenting whether the application is deemed technically complete.

DEQ assigns permits to engineers over a year in advance of when applications are due. While assigning permits, supervisors consider the previous author and the permit complexity to evaluate whether there are opportunities to train new permit writers; supervisors attempt to balance the use of institutional permit and facility knowledge with opportunities for training new staff. Applications are received in either hard copy or electronically, using a designated email address or the ePortal program for receiving applications. The ePortal is a web interface dedicated for permittees; specifically, for the application process (across multiple Arkansas regulatory programs, including the water permits program). Upon receipt of the application, applications arrive in the "inbox" for administrative staff, who begin to code the receipt date and some basic facility information into a database. The application is then routed to a supervisor for assignment if the application was unexpected; otherwise, all other permits are already assigned and the applications will be directed to the assigned permit writer upon receipt.

### *Program Strengths*

Application forms were available and submitted on time for permits reviewed during the PQR. DEQ's application website includes direct links to EPA's current series 2 application forms, ensuring the most current and appropriate application forms are provided to applicants. DEQ's

staff conduct outreach to applicants early in the process and track the application process clearly. DEQ’s PDS includes clear records documenting the determination of the application’s administrative completeness.

*Areas for Improvement*

Application forms reviewed for major POTWs (AR0038466 City of Hope and AR0021733 City of DeQueen) lack three priority pollutant scans and results from four whole effluent toxicity (WET) tests, as required by 40 CFR 122.21(j)(4)(iv) and (vi) and 122.21(j)(5)(i) to (x), respectively. The review team noted that for permits where development was delayed from the time of application receipt, fact sheets did not address the lapse in time or explain that the data are still considered representative of the discharge.

*Action Items*

<b>Essential</b>	<ul style="list-style-type: none"> <li>•Ensure that individual major municipal application forms comply with federal application requirements detailed in 40 CFR 122.21(j)(4) and (5).</li> </ul>
<b>Recommended</b>	<ul style="list-style-type: none"> <li>•For permits where permit development was delayed following application receipt, DEQ should consider providing a discussion in fact sheets that addresses the reason for the lapse in processing and explanation that the data are still representative of the discharge.</li> </ul>

**B. Developing Effluent Limitations**

**1. Technology-based Effluent Limitations**

NPDES regulations at 40 CFR 125.3(a) require that permitting authorities develop technology-based requirements where applicable. Permits, fact sheets and other supporting documentation for POTWs and non-POTWs were reviewed to assess whether technology-based effluent limitations (TBELs) represent the minimum level of control that must be imposed in a permit.

*TBELs for POTWs*

*Background and Process*

POTWs must meet secondary or equivalent to secondary standards, including limits for BOD (biochemical oxygen demand), TSS, pH, and percent pollutant removal. Also, permits must contain numeric limits for all these parameters (or authorized alternatives) in accordance with the secondary treatment regulations at 40 CFR Part 133. A total of seven POTW permits were reviewed as part of the PQR.

DEQ staff follow state policy and apply APC&EC Regulation 6 for establishing effluent limitations for CBOD and TSS. Regulation 6.104(A)(8) incorporates federal regulations, including 40 CFR Part 133 (adopted verbatim). In addition, Arkansas applies federally approved, adjusted TSS

requirements (i.e., alternate state requirements, or ASRs) for TSS (90 mg/L as an average monthly limitation). Further, Regulation 6.401 identifies various types of facilities (i.e., based on discharge flow) and receiving streams for which Regulation 6 presents basic minimum standards for CBOD and TSS in the discharge. The current CPP contains a nutrient policy requiring all major POTWs to conduct nutrient parameter monitoring; DEQ will consider the data after five years to determine whether continued monitoring is required.

Permit writers evaluate facilities and limits with each permit renewal, especially for secondary treatment standards (and specifically those eligible for ASRs), and conduct statistical analyses to determine whether existing limitations are still appropriate. Permit writers document these evaluations and analyses in the permit fact sheets.

DEQ establishes minimum percent removal requirements for CBOD and TSS in Part II (Other Conditions) of NPDES permits for POTWs, however, NPDES permits lack influent monitoring requirements for CBOD and TSS. Further, certain fact sheets for municipal permits list the removal of influent monitoring requirements in the summary of changes from the previous permit; however, fact sheets lack explanation for the removal of influent monitoring requirements.

*Program Strengths*

DEQ’s permits appropriately establish effluent limitations for CBOD, TSS, pH, and minimum percent removal requirements, consistent with federal secondary treatment standards. Further, effluent limitations are established in appropriate units and forms. Fact sheets for POTW permits provide an adequate description of wastewater treatment processes and regulatory basis for effluent limitations.

*Areas for Improvement*

DEQ’s permits, such as AR0038466 City of Hope, lack influent monitoring requirements for CBOD and TSS, which is required to determine compliance with established minimum percent removal requirements. Further, certain fact sheets list the removal of influent monitoring requirements in the summary of changes from the previous permit; however, fact sheets lack explanation for the removal of influent monitoring requirements. Fact sheets would be strengthened with a specific discussion of the basis for the removal of influent monitoring requirements and, in general, any change in permit requirements from what the previous permit required.

*Action Items*

Essential	<ul style="list-style-type: none"> <li>•DEQ must establish influent monitoring requirements for CBOD and TSS in order to demonstrate the permittee has achieved compliance with minimum percent removal requirements for these parameters established consistent with 40 CFR 133.102.</li> </ul>
Recommended	<ul style="list-style-type: none"> <li>•DEQ should include specific discussion of the basis for the removal of the influent monitoring requirements in the fact sheet.</li> </ul>

## *TBELs for Non-POTW Dischargers*

### *Background and Process*

Permits issued to non-POTWs must require compliance with a level of treatment performance equivalent to Best Available Technology Economically Achievable (BAT) or Best Conventional Pollutant Control Technology (BCT) for existing sources, and consistent with New Source Performance Standards (NSPS) for new sources. Where federal effluent limitations guidelines (ELGs) have been developed for a category of dischargers, the TBELs in a permit must be based on the application of these guidelines. If ELGs are not available, a permit must include requirements at least as stringent as BAT/BCT developed on a case-by-case using best professional judgment (BPJ) in accordance with the criteria outlined at 40 CFR 125.3(d). Three non-POTW permits were reviewed as part of the PQR.

DEQ staff follow state policy and apply APC&EC Regulation 6 for establishing effluent limitations for non-POTW discharges. Regulation 6.104(A)(11) incorporates federal regulations, including 40 CFR Parts 400 through 471 (except for section 401.17), adopted verbatim. DEQ applies TBELs for ELGs based on federal ELGs. DEQ's fact sheets include descriptions of non-municipal facility operations, expected waste streams, and wastewater treatment processes. Further, fact sheets clearly identify applicable ELGs and, specifically, how they apply to individual waste streams, and plainly illustrate effluent limitation calculations for ELG-based TBELs.

For those industrial discharges where ELGs do not apply, permit writers consider certain "standard" effluent limitations that might be applicable to the discharge based on similar facility operations and discharge types. In addition, permit writers will consider the applicability of any available standards or water quality criteria (e.g., drinking water standards). Permit writers describe in permit fact sheets the basis for effluent limitations developed on a case-by-case basis using BPJ.

### *Program Strengths*

DEQ's permits appropriately apply ELG-based TBELs in permits developed for non-POTW facilities. Accompanying fact sheets provide adequate descriptions of facility operations, expected waste streams, and wastewater treatment processes. In addition, fact sheets clearly present the basis for TBELs, including specific regulatory citations, and provide calculations supporting the development of TBELs.

### *Areas for Improvement*

DEQ's fact sheets for non-POTW facilities do not consistently include discussions specific to facility categorization and applicability of the different levels of treatment performance (i.e., BAT and BCT).

*Action Items*

Essential	<ul style="list-style-type: none"> <li>•The PQR did not identify any essential action items for this section.</li> </ul>
Recommended	<ul style="list-style-type: none"> <li>•DEQ should develop consistent discussions of non-municipal facility categorization with respect to the applicability of ELGs.</li> </ul>

**2. Reasonable Potential and Water Quality-Based Effluent Limitations***Background*

The NPDES regulations at 40 CFR 122.44(d)(1)(i) require permits to include any requirements in addition to or more stringent than technology-based requirements where necessary to achieve state water quality standards, including narrative criteria for water quality. To establish such “water quality-based effluent limits” (WQBELs) for particular pollutants, the permitting authority evaluates whether any pollutants or pollutant parameters cause, have the reasonable potential to cause, or contribute to an excursion above any State WQS.

The PQR for DEQ assessed the processes employed to implement these requirements. Specifically, the PQR reviewed permits, fact sheets, and other documents in the administrative record to evaluate how permit writers and water quality modelers:

- determined the appropriate water quality standards applicable to receiving waters,
- evaluated and characterized the effluent and receiving water including identifying pollutants of concern,
- determined critical conditions,
- incorporated information on ambient pollutant concentrations,
- assessed any dilution considerations,
- determined whether limits were necessary for pollutants of concern and, where necessary,
- calculated such limits or other permit conditions.

For impaired waters, the PQR also assessed whether and how permit writers consulted and developed limits consistent with the assumptions of applicable EPA-approved TMDLs.

*Process for Assessing Reasonable Potential*

Permit writers refer to DEQ databases to identify the receiving waterbody, impairment status, and applicable TMDLs. Arkansas’s WQS are contained in APC&EC Rule 2. For ambient data, permit writers use monitoring station data available on DEQ’s website, in addition to

streamflow data available from the U.S. Geological Survey (USGS), e.g., 7Q10 and harmonic flow.

Permit writers evaluate RP for toxic parameters for which water quality criteria exist, based on a review of application data and the PPS results, using a standard spreadsheet model. Permit writers may use separate RP spreadsheets to evaluate toxics, ammonia, and total residual chlorine. Permit writers conduct modeling for oxygen-demanding pollutants and ammonia. A specific staff person evaluates RP for WET and provides results to the permit writer. Permit writers evaluate all available data and will only exclude data if it is determined to be an erroneous result or a poor sample, not representative of the permitted discharge; the basis for these determinations is documented in the permit fact sheet.

DEQ maintains guidance for conducting RP assessments in the CPP, which generally aligns with EPA's *Technical Support Document for Water Quality-Based Toxics Control* (TSD). In terms of RP multipliers, the CPP (January 2000) describes two scenarios for varying sizes of effluent datasets. For data sets of 19 or fewer data points, the geometric mean of the data is multiplied by a factor of 2.13, which is based on a coefficient of variation of 0.6 and 95% probability basis. For effluent data sets consisting of 20 or more data points, DEQ prescribes using the highest value of the dataset in the RP evaluation. This differs from the recommendation in the TSD, which calls for multiplying the highest concentration in the effluent data set by the RP multiplying factor.

DEQ indicated there is no established minimum number of data points required before evaluating RP; however, decision-making based on reliable and statistically significant datasets is important to provide the regulated community and public protective permits based on sound science. Currently, DEQ's NPDES implementation approach is that if RP is shown based on a very small dataset, DEQ may require additional monitoring during the permit term to establish a more representative dataset upon which to evaluate RP, but may or may not establish a WQBEL. However, the EPA NPDES regulations at 40 CFR 122.44(d)(1)(iii) require the establishment of effluent limitations (e.g., for WET) where valid monitoring data indicates that the permitted effluent discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above any state WQS. These regulations are applicable to all WQS, including narrative criteria for WET, and apply regardless of the size of the dataset used to determine reasonable potential, when data are representative of the permitted discharge.

DEQ's fact sheets include RP evaluation summaries and typically the full evaluation, including data inputs and assessment results, is available via web links in the fact sheet.

#### *Process for Developing WQBELs*

DEQ's permit writers calculate WQBELs using the same spreadsheet that is used to evaluate RP; DEQ's methodology for developing WQBELs is consistent with that contained in EPA's TSD. Permit writers consult APC&EC Rule 2.404 and the CPP to implement the mixing zone policy. Dilution considerations are built into RP spreadsheets and permit writers can select the appropriate dilution during each RP assessment. DEQ's fact sheets include either the WQBELs calculations themselves or a web link to the full spreadsheet, analysis, and calculations.

### *Program Strengths*

#### Reasonable Potential

DEQ's fact sheets clearly identify the receiving stream, applicable designated uses, impairment status, and applicable TMDLs. Fact sheets include discussions of the PPS results, applicable WQS, and data inputs for the water quality assessment. Further, fact sheets and permit records contain thorough discussions of the water quality assessment process, including summary reports and model outputs.

#### WQBEL Development

Fact sheets include clear illustration of applicable WQBELs, including values that are factored into the calculations, such as data to understand how mixing is considered. In some cases, fact sheets include a web link to the specific model output or the previous fact sheet to provide additional rationale for the final WQBELs.

### *Areas for Improvement*

#### Reasonable Potential

When evaluating RP with a small data set, DEQ should use the maximum reported effluent concentration, which is recommended by the TSD, rather than using the geometric mean effluent value. For situations where only a small data set is available, DEQ may want to consider increasing the monitoring frequency in permits to ensure adequate and representative data (40 CFR 122.21(j)) are available during upcoming permit renewals to evaluate RP with confidence in the available data set.

#### WQBEL Development

Currently, DEQ's NPDES implementation approach is that in cases where a small data set results in a determination of RP and WQBELs would be required (e.g., WET), DEQ may require additional and representative (40 CFR 122.21(j)) effluent monitoring during the permit term, but may or may not establish a WQBEL. However, the EPA NPDES regulations at 40 CFR 122.44(d)(1)(iii) require the establishment of effluent limitations for pollutants (e.g., WET) where valid monitoring data indicate that the permitted effluent is discharged at a level which will cause, have the reasonable potential to cause, or contributes to an in-stream excursion above any state WQS.

In some cases, such as for WET, even where data show that an excursion of a WQS has already occurred, DEQ does not include a limit in the permit. However, the regulations at 40 CFR 122.44(d)(1) provide that where a discharge causes, has the reasonable potential to cause, or contributes to an excursion of WQS, the permit must include an effluent limitation. If DEQ determines that a sample is no longer representative of the permittee's operations and discharge due to changes in treatment, processes, or other BMPs that have resolved toxicity, and a limit is not needed, DEQ must provide detailed documentation explaining the basis for their determination in the permit fact sheet.

Action Items

<p>Essential</p>	<ul style="list-style-type: none"> <li>• <u>WQBEL Reasonable Potential</u> <ul style="list-style-type: none"> <li>• The PQR did not identify any essential action items for this section.</li> </ul> </li> <li>• <u>WQBEL Development</u> <ul style="list-style-type: none"> <li>• DEQ must establish WQBELs where data indicate that the permitted discharge causes, has the reasonable potential to cause, or contributes to an excursion above any state WQS, in accordance with 40 CFR 122.44(d)(1)(i) - (vii). If representative data show that an excursion of any criteria, including narrative WET criteria, has already occurred or indicates that the discharge has the reasonable potential to cause or contributes to an excursion, a limit must be included in the permit, even where the data set used in the reasonable potential analysis is limited or no data exists. If data are determined not to be or are no longer representative of the permitted discharge, then DEQ must document the basis for this determination in the fact sheet. DEQ should revise its CPP and/or water quality standards if needed, upon the next triennial review no later than 2024, to address these items.</li> </ul> </li> </ul>
<p>Recommended</p>	<ul style="list-style-type: none"> <li>• <u>WQBEL Reasonable Potential</u> <ul style="list-style-type: none"> <li>• When evaluating RP with a small data set, DEQ should use the maximum reported effluent concentration, recommended by EPA's 1991 TSD, rather than using the geometric mean effluent value. For situations where only a small data set is available, DEQ may want to consider increasing the monitoring frequency in permits to provide additional and representative data (40 CFR Part 122.21(j)) for RP determinations in the next permit renewal.</li> </ul> </li> <li>• <u>WQBEL Development</u> <ul style="list-style-type: none"> <li>• The PQR did not identify any recommended action items for this section.</li> </ul> </li> </ul>

**3. Final Effluent Limitations and Documentation**

*Background and Process*

Permits must comply with all applicable statutory and regulatory requirements, including technology and water quality standards, and must include effluent limitations that ensure that all applicable CWA standards are met (i.e., CWA Section 301(b)(1)(C)). The permitting authority

must identify the most stringent effluent limitations and establish them as the final effluent limitations in the permit. In addition, for reissued permits, if any of the limitations are less stringent than limitations on the same pollutant in the previous NPDES permit, the permit writer must conduct an anti-backsliding analysis, and if necessary, revise the limitations accordingly. In addition, for new or increased discharges, the permitting authority should conduct an antidegradation review, to ensure the permit is written to maintain existing high quality of surface waters, or if appropriate, allow for some degradation. The NPDES regulations at 40 CFR 131.12 outline the common elements of the antidegradation review process.

In addition, permit records for POTWs and industrial facilities should contain comprehensive documentation of the development of all effluent limitations. Technology-based effluent limits should include assessment of applicable standards, data used in developing effluent limitations, and actual calculations used to develop effluent limitations. The procedures implemented for determining the need for WQBELs as well as the procedures explaining the basis for establishing, or for not establishing, WQBELs should be clear and straight forward. The permit writer should adequately document changes from the previous permit, ensure draft and final limitations match (unless the basis for a change is documented), and include all supporting documentation in the permit file. The permit writer should sufficiently document determinations regarding anti-backsliding and antidegradation requirements.

DEQ's permit writers include a useful discussion of the facility operations, expected waste streams, and wastewater treatment processes in fact sheets, to provide an understanding of applicable TBELs. Fact sheets clearly identify applicable TBELs, whether they are based on secondary treatment standards for POTWs or ELGs for non-municipal facilities. Certain permit records reviewed for non-municipal facilities include technical memos or additional documentation addressing development of applicable ELG-based TBELs, and offer a comparison of TBELs and WQBELs, to illustrate that the most stringent effluent limitation is established in the permit.

DEQ consistently includes detailed information regarding the receiving waterbody, designated uses, applicable WQS, waterbody impairment status, and TMDL status. Fact sheets address pollutants of concern and the data evaluated in the RP evaluation. DEQ provides good documentation of the RP evaluation and WQBELs development in the permit record. Fact sheets often include web links to the full RP assessment and accompanying WQBEL calculations, and in certain cases, a link to the previous RP assessment and discussion for additional understanding of the rationale for WQBELs.

DEQ's fact sheets contain useful summary tables that present the array of applicable effluent limitations, including applicable TBELs, calculated WQBELs, previous effluent limitations, and a final column listing the proposed effluent limitations. DEQ offers a clear understanding of its process for evaluating applicable effluent limitations and applying appropriate considerations in establishing final effluent limitations. In addition, fact sheets also include a section specifically identifying changes since the previous permit; this is a strong feature of a fact sheet and offers readers a useful at-a-glance understanding of specific issues.

Permit writers consider federal anti-backsliding requirements with every pollutant and include a discussion addressing the stringency of final effluent limitations relative to the previous effluent limitations, including a rationale for allowing backsliding when applicable.

DEQ has recently issued a draft Antidegradation Implementation Methodology for public review and comment (the comment period was extended to October 2, 2020); the draft methodology proposes means to implementing the policy that is contained in Chapter 2 of APC&EC Rule 2. The antidegradation policy implementation document is the first such document for DEQ, despite the longstanding inclusion of a policy in APC&EC Rule 2. Certain fact sheets reviewed contain a basic discussion of antidegradation requirements; it is brief because DEQ rarely evaluates it in depth.

*Program Strengths*

DEQ’s fact sheets provide a good understanding of the permit development process, including the consideration of available data, their review of applicable regulations and policies, and evaluation of the most stringent effluent limitations. Fact sheets provide direct web links to useful documents such as the full RP assessment, WQBEL calculations, TBEL calculations, and previous rationale documentation.

*Areas for Improvement*

DEQ’s fact sheets do not consistently discuss antidegradation requirements; however, with a draft implementation policy currently out for public comment, DEQ should consider updating its fact sheet templates to include a more detailed discussion of policy requirements and the accompanying evaluation.

*Action Items*

Essential	<ul style="list-style-type: none"> <li>•The PQR did not identify any essential action items for this section.</li> </ul>
Recommended	<ul style="list-style-type: none"> <li>•DEQ should ensure that fact sheets consistently discuss the state's antidegradation requirements and how they are satisfied by the permit.</li> </ul>

**C. Monitoring and Reporting Requirements**

*Background and Process*

NPDES regulations at 40 CFR 122.41(j) require permittees to evaluate compliance with the effluent limitations established in their permits and provide the results to the permitting authority. Monitoring and reporting conditions require the permittee to conduct routine or episodic self-monitoring of permitted discharges and where applicable, internal processes, and

report the analytical results to the permitting authority with information necessary to evaluate discharge characteristics and compliance status.

Specifically, 40 CFR 122.44(i) requires NPDES permits to establish, at minimum, annual reporting of monitoring for all limited parameters sufficient to assure compliance with permit limitations, including specific requirements for the types of information to be provided and the methods for the collection and analysis of such samples. In addition, 40 CFR 122.48 requires that permits specify the type, intervals, and frequency of monitoring sufficient to yield data that are representative (as well as 40 CFR 122.21(j)) of the monitored activity. The regulations at 40 CFR 122.44(i) also require reporting of monitoring results with a frequency dependent on the nature and effect of the discharge. Additionally, 40 CFR Part 127 requires NPDES-regulated entities to submit certain data electronically, including discharge monitoring reports and various program-specific reports, as applicable.

NPDES permits should specify appropriate monitoring locations to ensure compliance with the permit limitations and provide the necessary data to determine the effects of the effluent on the receiving water. A complete fact sheet will include a description and justification for all monitoring locations required by the permit. States may have policy or guidance documents to support determination of appropriate monitoring frequencies; documentation should include an explicit discussion in the fact sheet providing the basis for establishing monitoring frequencies, including identification of the specific state policy or internal guidance referenced. Permits must also specify the sample collection method for all parameters required to be monitored in the permit. The fact sheet should present the rationale for requiring grab or composite samples and discuss the basis of a permit requirement mandating use of a sufficiently sensitive 40 CFR Part 136 analytical method.

DEQ's permit writers reference an internal memorandum that includes a table listing standard monitoring frequencies based on facility size and type of discharge. In addition, the CPP contains requirements for nutrient monitoring for major facilities for the purposes of gathering specific data. Permit writers consistently identify the effluent monitoring location as a location beyond the final treatment process. Also, permits consistently state that sample types must be consistent with requirements established at 40 CFR Part 136.

DEQ specifies in either Part I or Part II of permits that analyses for application and compliance monitoring must be conducted using sufficiently sensitive analytical methods. Permits require monthly electronic submittal of discharge monitoring reports through NetDMR. Permits may also include special reporting requirements for sanitary sewer overflows (SSOs) and compliance schedules, where applicable.

### *Program Strengths*

DEQ's permits clearly establish monitoring and requirements, including clear identification of monitoring location, frequency, and sample type. Permits establish appropriate monitoring frequencies based on the type of discharge and corresponding limit bases. Further, permits reviewed include requirements to conduct monitoring in accordance with 40 CFR Part 136 and use sufficiently sensitive analytical methods. Permits require electronic submittal of discharge

monitoring reports. In addition, permits identify clear reporting frequencies and submittal requirements, for routine compliance monitoring and special monitoring conditions.

### *Areas for Improvement*

DEQ's permits for POTWs lack influent monitoring requirements; therefore, it is not possible for DEQ to determine whether the permittee achieves compliance with all effluent limitations and permit requirements (specifically minimum percent removal requirements for CBOD and TSS).

### *Action Items*

<b>Essential</b>	<ul style="list-style-type: none"> <li>•DEQ must ensure that permits establish monitoring requirements that demonstrate the permittee achieves compliance with all effluent limitations and permit requirements established in accordance with 40 CFR 122.44(i).</li> </ul>
<b>Recommended</b>	<ul style="list-style-type: none"> <li>•The PQR did not identify any recommended action items for this section.</li> </ul>

## **D. Standard and Special Conditions**

### *Background and Process*

Federal regulations at 40 CFR 122.41 require that all NPDES permits, including NPDES general permits, contain certain “standard” permit conditions. Further, the regulations at 40 CFR 122.42 require that NPDES permits for certain categories of dischargers contain additional standard conditions. Permitting authorities must include these conditions in NPDES permits and may not alter or omit any standard condition unless such alteration or omission results in a requirement more stringent than those in the federal regulations.

Permits may also contain additional requirements that are unique to a particular discharger. These case-specific requirements are generally referred to as “special conditions.” Special conditions might include requirements such as: additional monitoring or special studies such as a mercury minimization plan, best management practices [see 40 CFR 122.44(k)], or permit compliance schedules [see 40 CFR 122.47]. Where a permit contains special conditions, such conditions must be consistent with applicable regulations.

DEQ's permits contain NPDES standard conditions in Part III (Standard Conditions). Standard conditions are organized into General Conditions (Section A), Operation and Maintenance of Pollution Controls (Section B), Monitoring and Records (Section C), and Reporting Requirements (Section D). Part IV of DEQ's permits include definitions. DEQ uses boilerplate for standard conditions and reviews them periodically for QA/QC purposes. DEQ last updated its standard conditions following the last PQR and again in 2017 to include language addressing NetDMR requirements.

Special conditions are established in Part II of DEQ's permit, are based on boilerplate language, and include minimum percent removal requirements, pretreatment conditions, WET monitoring (40 CFR 122.41(j)(1) and (4)) and reporting requirements, SSO reporting requirements, and best management practices (BMPs). Compliance schedules are included in Part I.B of the permit and identify compliance activities and due dates.

*Program Strengths*

DEQ's standard conditions are well organized, clearly identified, and generally consistent with federal standard conditions. In addition, special conditions are presented clearly and established appropriately for the facility and discharge type.

*Areas for Improvement*

DEQ's standard conditions appear to address penalties only partially; the penalty language in 40 CFR 122.41 is more extensive than what DEQ includes in Part III of its permits.

*Action Items*

Essential	•The PQR did not identify any essential action items for this section.
Recommended	•DEQ should ensure that penalty amounts and language are consistent with federal requirements.

**E. Administrative Process**

*Background and Process*

The administrative process includes documenting the basis of all permit decisions (40 CFR 124.5 and 40 CFR 124.6); coordinating EPA and state review of the draft (or proposed) permit (40 CFR 123.44); providing public notice (40 CFR 124.10); conducting hearings if appropriate (40 CFR 124.11 and 40 CFR 124.12); responding to public comments (40 CFR 124.17); and modifying a permit (if necessary) after issuance (40 CFR 124.5). EPA discussed each element of the administrative process with Arkansas, and reviewed materials from the administrative process as they related to the core permit review.

APC&EC Regulation 8 (Administrative Procedures) details public notice requirements for NPDES permits. DEQ provides a 10-day public notice of an administratively complete permit application in a newspaper of general circulation in the county in which the proposed facility or activity is located. In addition, DEQ provides a 30-day public notice of draft permits, also with the same publication requirements. DEQ receives comments in both electronic and hard copy format and provides responses to all comments received, offering regulatory citations where

applicable. DEQ provides a copy of the final determination to all who submitted comments on the draft permit. Public hearings may be requested during the public comment period and are held at a location near the facility. DEQ records public hearings and provides responses to oral comments in the same manner as written comments, and these responses are also included in the final determination.

Permit appeals are directed to the Pollution Control and Ecology Commission, which is the appellate and rulemaking body of DEQ. Appeals are rare; DEQ noted they may receive one appeal per year, if that many.

*Program Strengths*

DEQ followed appropriate public notice requirements and collected and responded to comments adequately. Permit records include documentation demonstrating that DEQ implemented public notice procedures properly. DEQ’s permit records are well organized and clearly identify comments received on the draft permit as well as responses provided. DEQ’s fact sheets clearly present comments received on the draft permit along with DEQ’s responses, at the beginning of permit fact sheets.

*Areas for Improvement*

DEQ’s public notices for POTW permits (AR0038466 City of Hope and AR0033707 City of Tillar) lacked a general description of the sludge use and disposal practices, consistent with the requirements contained in 40 CFR 124.10(d)(1)(vii).

*Action Items*

Essential	<ul style="list-style-type: none"> <li>•DEQ must include a general description of the sludge use and disposal practices in public notices for POTW permits, consistent with the requirements of 40 CFR 124.10(d)(1)(vii).</li> </ul>
Recommended	<ul style="list-style-type: none"> <li>•The PQR did not identify any recommended action items for this section.</li> </ul>

**F. Administrative Record and Fact Sheet**

*Background and Process*

The administrative record is the foundation that supports the NPDES permit. If EPA issues the permit, 40 CFR 124.9 identifies the required content of the administrative record for a draft permit and 40 CFR 124.18 identifies the requirements for a final permit. Authorized state programs should have equivalent documentation. The record should contain the necessary documentation to justify permit conditions. At a minimum, the administrative record for a permit should contain the permit application and supporting data; draft permit; fact sheet or

statement of basis;<sup>2</sup> all items cited in the statement of basis or fact sheet including calculations used to derive the permit limitations; meeting reports; correspondence between the applicant and regulatory personnel; all other items supporting the file; final response to comments; and, for new sources where EPA issues the permit, any environmental assessment, environmental impact statement, or finding of no significant impact.

Current regulations require that fact sheets include information regarding the type of facility or activity permitted, the type and quantity of pollutants discharged, the technical, statutory, and regulatory basis for permit conditions, the basis and calculations for effluent limits and conditions, the reasons for application of certain specific limits, rationales for variances or alternatives, contact information, and procedures for issuing the final permit. Generally, the administrative record includes the permit application, the draft permit, any fact sheet or statement of basis, documents cited in the fact sheet or statement of basis, and other documents contained in the supporting file for the permit.

DEQ's NPDES administrative record is housed in the PDS, in electronic format. The PDS includes applications, the previous permit, correspondence, inspections, data reports, water quality assessment reports and model outputs, draft permits, fact sheets, comments received and DEQ's responses to comments, and public notice documents. NPDES permit records are clearly identified, the record is easy to navigate, and files are readily available for review.

DEQ's fact sheets are well organized and appear consistent across permit type and permit writer. Standard section headers are used and clearly identify the subject matter.

### *Program Strengths*

DEQ's administrative record is very well organized, files are clearly identified, and records appear complete. DEQ's fact sheets contain all required elements. Further, fact sheets reviewed clearly discuss each pollutant of concern and pollutant for which effluent limitations are established and identify the basis for the final effluent limitation. DEQ's fact sheets consistently identify the basis for effluent limitations, and clearly demonstrate the comparison between existing effluent limitations, TBELs, and WQBELs and selection of the most stringent effluent limitation as the final limitation, through presentation in a summary table. The summary table also includes both concentration- and mass-based effluent limitations, for comparison.

### *Areas for Improvement*

Certain fact sheets lack rationale for effluent limitations that were carried forward from the previous permit; DEQ's fact sheets would be strengthened with a discussion of the original basis for all effluent limitations.

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<sup>2</sup> Per 40 CFR 124.8(a), every EPA and state-issued permit must be accompanied by a fact sheet if the permit: Incorporates a variance or requires an explanation under 124.56(b); is an NPDES general permit; is subject to widespread public interest; is a Class I sludge management facility; or includes a sewage sludge land application plan.

*Action Items*

## Essential

- The PQR did not identify any essential action items for this section.

## Recommended

- DEQ should consider including the original basis for effluent limitations that are carried forward from the previous permit.

## IV. NATIONAL TOPIC AREA FINDINGS

National topic areas are aspects of the NPDES permit program that warrant review based on the specific requirements applicable to the selected topic areas. These topic areas have been determined to be important on a national scale. National topic areas are reviewed for all state PQRs. The national topics areas are: Permit Controls for Nutrients in Non-TMDL Waters, Effectiveness of POTW NPDES Permits with Food Processor Contributions, and Small Municipal Separate Storm Sewer System (MS4) Permit Requirements.

### A. Permit Controls for Nutrients in Non-TMDL Waters

#### *Background*

Nutrient pollution is an ongoing environmental challenge, however, nationally permits often lack nutrient limits. It is vital that permitting authorities actively consider nutrient pollution in permitting decisions. Of the permits that do have limits, many are derived from wasteload allocations in TMDLs, since state criteria are often challenging to interpret. Receiving waters may already be impaired by nutrient pollution or may be vulnerable to nutrient pollution due to their hydrology and environmental conditions.

To assess how nutrients are addressed in the Arkansas NPDES program, EPA Region 6 reviewed 4 permits and referenced the Arkansas Pollution Control and Ecology Commission Rule 2.405 for biological integrity criteria, 2.505 for DO criteria, Rule 2.509 for chlorophyll-a and total phosphorus criteria, 2.512 for total ammonia *as N* criteria and 6.401 for Nitrate plus Nitrite Nitrogen, *Ammonia as N* and total phosphorus (when discharge consists of domestic or treated wastewater). Arkansas's CPP guidance document was also consulted to understand how nutrient criteria are implemented throughout the state. However, due to the small size of the universe of permits that establish permit controls for nutrients in non-TMDL waters, the permits reviewed were those that authorized discharges to waterbodies with established TMDLs for nutrients. See Table 2 below.

**Table 2. Permits Reviewed for Nutrient Control in Impaired Waters**

NPDES Permit No.	Facility	Action	Issued Date	Expiration Dated
AR0021768	City Corporation	Reissue	August 16, 2016	August 31, 2021
AR0003018	Tyson Poultry-Grannis	Modification	July 6, 2016	May 31, 2021
AR0021792	City of Berryville	Reissue	September 8, 2016	October 31, 2021
AR0049867	City of Bedford Falls Mobile Home Park	Reissue	December 11, 2018	December 31, 2023

APC&EC Rule 2.509 states that “Materials stimulating algal growth shall not be present in concentrations sufficient to cause objectionable algal densities or other nuisance aquatic vegetation or otherwise impair any designated use of the waterbody.” There are six nutrient control criteria that have effluent limitations: biological integrity, DO, chlorophyll-a, total phosphorus, total ammonia-as N, and nitrate plus nitrite nitrogen. Effluent limitations associated with these criteria apply to all types of discharge except for nitrate plus nitrite nitrogen, which is applicable to domestic wastewater only.

A waterbody can be designated as impaired for nutrients after an assessment by DEQ demonstrates an exceedance of any state approved numeric water quality standard was caused by excess nutrients. Assessments take into consideration the underlying characteristics of the waterbody as well a combination of factors such as water clarity, periphyton or phytoplankton production, DO values, DO saturation, diurnal DO fluctuations, pH values, aquatic-life community structure, and possibly others.

DO criteria are applicable to all NPDES individual permittees regardless of facility type or the nature of the discharge that discharge into any water of the state. Criteria are dependent on the size of the watershed, the specific basin, and seasonality. During primary season DO criteria range between 5-6 mg/L depending on watershed size and the basin in question. During the critical season DO criteria have a range from 2-6 mg/L depending on the size of the watershed and the basin (APC&EC Rule 2.505). In waterbodies located in watersheds less than 10 square miles during critical season, a DO criterion of 2mg/L is applied unless the area is suspected of having significant groundwater flows or enduring ponds that could support aquatic life. If it is determined that aquatic life is supported, then the critical season criteria for the next size stream is applied.

Chlorophyll-a criteria are applicable to any NPDES individual permit regardless of facility type or the nature of the discharge. Water quality assessments are based on sampling conducted during primary season; from these samples the geometric mean is calculated for each season. However, there are site-specific criteria in place for Beaver Lake where concentrations cannot exceed 8µg/L.

The effluent standards for total phosphorous are based on APC&EC Rule 2.509. Standards range from 1.0 mg/L to 5.0 mg/L based on a design flow range of 0.5 to 15 MGD, respectively. Site-specific standards are applicable to point source dischargers in impaired waterbodies where the primary pollutant of concern is phosphorus and for waterbodies in nutrient surplus watersheds. Standards are determined on a case-by-case basis for facilities whose design flow is under 0.5

MGD or equal to or greater than 15 MGD. If the facility design flow exceeds 15 MGD, reduction of the phosphorus limit below 1 mg/L may be required based on the magnitude of the load and the type of downstream waterbody.

The criteria for total ammonia as N are applicable to all facilities and waterbodies. The one-hour average for acute criteria cannot be exceeded more than once every three years and is dependent upon pH. The average monthly concentration for chronic criteria is temperature- and pH-dependent. The highest four-day average in a month may not exceed 2.5 times the chronic criteria. The presence or absence of early aquatic life stages is also considered during evaluation of water quality/attainment of designated use.

The narrative standard for biological integrity is applicable to waterbodies throughout the state. It states that for all waterbodies that have aquatic life as a designated use, listed in Appendix A of Rule 2, the biota should be representative of streams that can support the specified fishery while taking into consideration the natural variability of the biotic community and the surrounding habitat. A biota assessment is conducted to compare similar communities via an in-stream study, comparison to a reference stream within the same ecoregion or comparing community characteristics from several referenced waterbodies.

#### *Program Strengths*

The fact sheets discuss the status of the receiving waterbodies and whether there is a TMDL associated with the impairment. Also, the fact sheets include adequate documentation and citation of statutory requirements that justify the rationale and basis of permit conditions. The calculations used to develop the mass and concentration limits are provided in the fact sheets. While all the fact sheets contained a discussion of reasonable potential analysis none of the permits reviewed reflected analysis for nutrients. However, reasonable potential analysis is typically reserved for toxicants based on Region 6 policy. Limits are expressed as numeric response criteria for DO and chlorophyll-a and numeric causal criteria for nitrogen and phosphorus. Permits include either nutrient effluent limits or monitoring and reporting when appropriate. DEQ has permitting implementation rules for nutrient criteria cited at APC&EC Rule 2.509, Regulation 6, and their CPP document.

During the review process it was observed that all four permits had numeric limits for DO usually expressed as an instantaneous minimum based on a modeling analysis. Two of the permits had numeric limits for total phosphorus based on the incorporation of a WLA from an approved TMDL. One of the permits required monitoring for total phosphorus. One permit had a numeric limit for nitrate based on a WLA from a TMDL. Currently, there is no methodology in DEQ's CPP for the incorporation of WLAs in permits, so the WLAs are incorporated directly as mass or concentration limits. Overall, the nutrient limits expressed in the permits are consistent with APC&EC Rule 2, Regulation 6, and the established TMDLs.

#### *Areas for Improvement*

When effluent limits are carried over from a previous permit or the previous permit is used as the justification of the limit, DEQ should consider including the original language that was used

to explain the limit development. DEQ should consider development of a methodology for incorporation of WLAs into permits consistent with 40 CFR 122.44.

DEQ should consider numeric translation of the narrative criteria stated in APC&EC Rule 2.509 using §304(a) criteria which was one of the methods recommended by EPA in the November 2001 Memorandum WQSP-01-01 to incorporate nutrient criteria into water quality standards. These criteria are intended to represent least-impacted stream conditions and as such, are presumed to protect multiple designated uses and prevent eutrophication.

*Action Items*

Essential	<ul style="list-style-type: none"> <li>•The PQR did not identify any essential action items for this section.</li> </ul>
Recommended	<ul style="list-style-type: none"> <li>•Translate the narrative criteria at APC&amp;EC Rule 2.509 into a numeric criteria based on §304(a) criteria.</li> <li>•When nutrient limits are carried over or based on a previous permit consider including the original explanation of the limit.</li> </ul>

**B. Effectiveness of POTW NPDES Permits with Food Processor Contributions**

The general pretreatment regulations (40 CFR Part 403) establish responsibilities of federal, state, and local government, industry, and the public to implement pretreatment standards to control pollutants from industrial users which may cause pass through or interfere with POTW treatment processes, or which may contaminate sewage sludge.

*Background*

Indirect discharges of food processors can be a significant contributor to noncompliance at recipient POTWs. Food processing discharges contribute to nutrient pollution (e.g., nitrogen, phosphorus, ammonia) to the nation’s waterways. Focusing specifically on the Food Processing Industrial Sector will synchronize PQRs with the Office of Enforcement Compliance and Assurance (OECA)’s Significant Non-compliance (SNC)/National Compliance Initiative (NCI).

The goal of the PQR was to identify successful and unique practices with respect to the control of food processor discharges by evaluating whether appropriate controls are included in the receiving POTW NPDES Permit and documented in the associated fact sheet or Statement of Basis; as well as by compiling information to develop or improve permit writers’ tools to be used to improve both POTW and industrial user compliance.

The PQR also assessed the status of the pretreatment program in Arkansas as well as specific language in POTW NPDES permits. With respect to NPDES permits, focus was placed on the following regulatory requirements for pretreatment activities and pretreatment programs:

- 40 CFR 122.42(b) (POTW requirements to notify Director of new pollutants or change in discharge);
- 40 CFR 122.44(j) (Pretreatment Programs for POTWs);
- 40 CFR 403.8 (Pretreatment Program Requirements: Development and Implementation by POTW), including the requirement to permit all significant industrial users (SIUs);
- 40 CFR 403.9 (POTW Pretreatment Program and/or Authorization to revise Pretreatment Standards: Submission for Approval);
- 40 CFR 403.12(i) (Annual POTW Reports); and
- 40 CFR 403.18 (Modification of POTW Pretreatment Program).

Arkansas via DEQ is the primary permitting authority to administer the pretreatment program. There are 24 POTWs with approved pretreatment programs. Of these, 16 POTWs have food processor SIUs. Additionally, there are four POTWs without approved pretreatment programs that also have food processor SIUs.

**Table 3. POTWs with Approved Pretreatment Programs**

POTW	NPDES PERMIT NO.	PLANT FLOW (MGD)	SIU	CIU	DESIGN FLOW	INDUSTRIAL FLOW
BENTONVILLE	AR0022403	3.14	4	1	4	0.3
BLYTHEVILLE-W	AR0022560	0.725	5	4	1.5	0
CLARKSVILLE	AR0022187	0.749	4	1	2	0.12
CONWAY-Tupelo	AR0051951	5.87	24	7	16	0.52
DEQUEEN	AR0021733	2.5	1	0	4	1.4
EL DORADO-S	AR0033723	2.84	8	4	7	1.45
FAYETTEVILLE	AR0020010	6.2	8	4	12.6	0.92
FORT SMITH	AR0021750	7.9	16	7	10	0.4
HARRISON	AR0034321	1.6	8	4	2.6	0.0256
HOT SPRINGS	AR0033880	11.2	7	3	16	0.112
JACKSONVILLE	AR0041335	7.56	14	1	12.31	1.2
JONESBORO-Eastside	AR0043401	6.98	16	7	9	1.48
LITTLE ROCK-Adams Field	AR0021806	20.01	36	14	36	2.06
N LITTLE ROCK-Faulkner Lake	AR0020303	6.02	14	2	12	0.526
NASHVILLE	AR0021776	1.7	2	2	3.5	0.02
PARAGOULD	AR0033766	3.24	7	6	6	0.4
PINE BLUFF	AR0033316	13.26	10	4	14	2.57
ROGERS	AR0043397	8.13	12	5	14	0.837
RUSSELLVILLE	AR0021768	5.734	13	3	7.3	0.94
SEARCY	AR0021601	4.97	11	1	5	0.19
SILOAM SPRINGS	AR0020273	3	4	2	5.3	1.5
SPRINGDALE	AR0022063	10.6	15	2	24	4.95
VAN BUREN	AR0021482	2.22	9	4	4	0.7
WEST MEMPHIS	AR0022039	4.6	8	4	6.3	0.276

The permitting process at the DEQ Office of Water Quality (OWQ) includes steps for review of applicable pretreatment requirements for all POTWs, regardless of size or status (major/minor or approved/non-approved). OWQ staff review permit applications, draft permits, fact sheets, and discharge monitoring reports (DMRs) to determine appropriate pretreatment conditions. OWQ also determines whether and when a POTW requires program development in accordance with 40 CFR 403.10(f)(2)(i). See Attachments I and II, in the appendix, for examples of pretreatment conditions in POTW permits.

All POTW permits include pretreatment conditions requiring the POTW to provide notice to the OWQ of any indirect dischargers that would be subject to the Clean Water Act §§ 301 or 306 if that discharger were directly discharging pollutants to waters of the state. The notice must include information on the quality and quantity of effluent from the indirect discharger to the POTW and an assessment of any impact on the POTW effluent or operation. OWQ reviews the subject information to determine whether the indirect discharger meets SIU status as defined by 40 CFR 403.3(v), and OWQ notifies the SIU accordingly.

The OWQ Compliance Branch, which consists of 14 staff members, conducts pretreatment inspections of approved POTW programs. The State Pretreatment Coordinator, which consists of one staff member, conducts the following tasks of general program oversight:

- Implementing the State Pretreatment Program in accordance with the General Pretreatment Regulations – 40 CFR Part 403;
- Reviewing POTW permits to determine appropriate pretreatment conditions;
- Determining whether pretreatment program development is required for a POTW;
- Auditing POTW pretreatment programs;
- Reviewing/approving modifications to POTW pretreatment programs;
- Reviewing technically based local limits development;
- Reviewing annual pretreatment program reports submitted by POTWs;
- Reviewing semi-annual pretreatment performance reports submitted by tracked Categorical Industrial Users (CIUs) of non-approved POTWs; and
- Providing technical and legal assistance to approved programs, developing programs, and industrial users.

For this review POTWs with food processors were discovered by reviewing annual reports submitted to EPA Region 6 by POTWs with federally approved pretreatment programs. Four POTWs were reviewed: two that have approved pretreatment programs (AR0021601 and AR0020303) and two that do not (AR0021741 and AR0020702). Two Industrial User permits were also reviewed (North Little Rock Tyson, and Searcy Land O'Frost). Sewer use ordinances (SUOs) were reviewed for the Cities of North Little Rock and the City of Searcy.

**Table 4. POTWs Reviewed for PQR**

Permittee	NPDES Permit No.	Approved Pretreatment Program?	Design Flow Average (MGD)	No. of SIUs <sup>1</sup>	No. of Food Processors <sup>1</sup>	Controls on Conventional Pollutants or Nutrients in SUO?
Green Forest WWTP	AR0021741	No	4.0 MGD	0	0	BOD and TSS
City of Batesville WWTP	AR0020702	No	4.36 MGD	3	3	BOD, TSS, pH, and O&G
City of Searcy	AR0021601	Yes	5.0 MGD	11	3	BOD, TSS, pH
North Little Rock	AR0020303	Yes	12.0 MGD	10	1	BOD, TSS, pH, and O&G

<sup>1</sup> Based on the information provided in the permit application.

Two food processing industrial user permits were also reviewed as part of the PQR; they are identified in the table below.

**Table 5. Industrial Food Processors Reviewed for PQR**

Facility Name	Permit No.	Receiving POTW	Type of Food Processor	Classification by POTW	Average Process Wastewater Discharge (gallons per day [gpd])	Monitored Pollutants
Land O' Frost, Inc.	3201301	City of Searcy	Manufacturer of specialty lunch meats	SIU	139,687	BOD, TSS, pH, Flow, Oil & Grease
Tyson Foods, Inc.	2020080126	City of North Little Rock	Poultry processor	SIU	60,000 <sup>2</sup>	pH, Temperature, BOD5, TSS, FOG, Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Silver, Thallium, Zinc

<sup>1</sup> Based on information included in the industrial user's permit.

<sup>2</sup> Based on information included in the industrial user's fact sheet.

### *Program Strengths*

Permits for all POTWs include requirements to identify SIUs (based on character and volume of pollutants). Permits for POTWs with approved pretreatment programs contain requirements to provide a written technical evaluation of the need to revise local limits following permit issuance or reissuance (40 CFR 122.44(j)(2)(ii)). The federal standard condition requirement for notification and impact assessment of significant changes in industrial flow or character (40 CFR 122.42(b)) is included in POTW permits. Permits and fact sheets for POTWs identify pretreatment program approval and modification dates as applicable. Fact sheets for POTW permits describe the industrial contributions (e.g., number of noncategorical SIUs and CIUs).

Industrial User control mechanisms/permits include appropriate effluent limitations and monitoring requirements for conventional pollutants and other pollutants of concern. Fact sheets for Industrial User control mechanisms/permits indicate that monitoring frequencies for BOD and TSS are greater than what is required under 40 CFR 403.12.

*Areas for Improvement*

Ensure that Part F of the application for POTWs is reviewed to ensure that Industrial Users are permitted as needed.

*Action Items*

Essential	•The PQR did not identify any essential action items for this section.
Recommended	•The permit writer should ensure that all Industrial Users are properly identified in the POTW's application.

### C . Small Municipal Separate Storm Sewer System (MS4) Permit Requirements

*Background*

As part of this PQR, EPA reviewed the state's small MS4 general permit for consistency with the Phase II stormwater permit regulations. EPA recently updated the small MS4 permitting regulations to clarify: (1) the procedures to be used when coverage is by general permits (see 40 CFR 122.28(d)); (2) the requirement that the permit establish the terms and conditions necessary to meet the MS4 permit standard (i.e., "to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act"), including conditions to address the minimum control measures, reporting, and, as appropriate, water quality requirements (see 40 CFR 122.34(a) and (b)); and (3) the requirement that permit terms be established in a "clear, specific, and measurable" manner (see 40 CFR 122.34(a)).

EPA reviewed the small MS4 General Permit, ARR04000, for consistency with the Phase II Stormwater permit regulations. DEQ issued this permit on November 6, 2018, with an effective date of August 1, 2019 and an expiration date of July 31, 2024. At the time of the PQR, there were sixty-three NOIs for facilities covered under this general permit. DEQ has two full time staff members to administer the stormwater program. There are four engineers assigned for the development of stormwater and MS4 permits.

Arkansas's small MS4 general permit contains conditions and requirements to have a Stormwater Management Program (SWMP) which includes the minimum requirements consistent with 40 CFR 122.26 and 40 CFR 122.30 through 122.37. In addition, Arkansas continues to administer the NPDES Stormwater program in accordance with the Clean Water Act.

### *Program Strengths*

DEQ's small MS4 general permit is consistent with the Phase II Stormwater permit regulations. It requires implementation of the six minimum measures and monitoring under certain circumstances. DEQ's small MS4 permit implements the Remand Rule. The small MS4 permit is a two-phase permit. This makes the SWMP an integral and enforceable part of the permit. To be compliant with the Remand Rule, major modifications to the SWMP are required to be publicly noticed through procedures laid out in the permit.

The permit addresses discharges to impaired water bodies with and without an approved TMDL. Discharges of pollutant(s) of concern to water bodies for which there is an approved TMDL are not eligible for this general permit unless they are consistent with the approved TMDL.

If the permittee discharges to an impaired water body with an approved TMDL, the permittee must comply with the WLA in the final permit in accordance with 40 CFR 122.44(d)(1)(vii)(1)(B) and will have three years to comply with the TMDL in accordance with APC&EC Rule 2.104. However, until the effective date of the WLA, the permittee shall control the discharges of pollutant(s) of concern to impaired waters and waters with approved TMDLs and shall assess the success in controlling those pollutants. The permit also has specific requirements where the impairment is for nutrient, turbidity, and bacteria.

There are monitoring requirements in the small MS4 general permit. No monitoring is required for outfalls discharging to waters not listed as impaired or without an approved TMDL. However, monitoring is required for outfalls discharging to 303(d) listed streams with stormwater as the cause of the impairment or streams with an approved TMDL. Additionally, monitoring may also be requested by the DEQ for data gathering purposes.

All annual reports are required to be submitted electronically. DEQ has an electronic reporting system (ePortal) to report all documents which meets the new NPDES Electronic Reporting Rule required to be in place for MS4 general permits in December 2023.

### *Areas for Improvement*

DEQ's Small MS4 general permit is consistent with the Phase II stormwater permit regulations; therefore, no areas of improvement are identified.

*Action Items*

Essential	<ul style="list-style-type: none"> <li>•The PQR did not identify any essential action items for this section.</li> </ul>
Recommended	<ul style="list-style-type: none"> <li>•The PQR did not identify any recommended action items for this section.</li> </ul>

**V. REGIONAL TOPIC AREA FINDINGS**

Regional Topic Areas are aspects of the NPDES permit program that warrant review based on regional importance or topics that unique and/or important to the state. Region 6 chose to review two regional topic areas: Implementation of Water Quality Standards for Minerals and Implementation of CWA Section 316(b) for Steam Electric Power Plant Permits.

**A. Implementation of Water Quality Standards for Minerals**

Mineral pollution is an ongoing issue for the state due in part to erosion and/or the nature of the discharging industry. Over the past two years the state has been actively working to reduce the backlog of permits with mineral issues. In April of 2018, 30 permits were administratively held due to mineral-related issues; as of September 2020 DEQ had reduced the number of permits held due to mineral related issues to five.

Federal regulations at 40 CFR 122.44(d)(1)(i) require permit limits to be developed for any pollutant that causes, has the reasonable potential to cause, or contribute to an impairment of water quality standards, whether those standards are narrative or numeric.

Arkansas’s mineral WQS are based on site-specific criteria, or domestic water supply criteria. Ecoregion benchmark values are intended to be used in the development of site-specific criteria as needed. The WQS for chlorides, sulfates, and total dissolved solids (TDS) are intended to protect the designated uses and water quality of the receiving water.

*Ecoregion-Referenced Stream Mineral WQS*

APC&EC Rule 2.511(B) defines the ecoregion-referenced stream mineral values. These values are considered to be the maximum naturally occurring levels and have been developed from Arkansas’s least-disturbed ecoregion reference streams. This is the primary basis the state uses to develop site-specific WQS. The following table was taken from the APC&EC Rule 2.511(B), and it lists the mineral values by ecoregion in mg/L.

**Table 6. Arkansas Reference Stream Mineral Values by Ecoregion**

Ecoregion	Chlorides	Sulfates	TDS
Ozark Highlands	13	17	240
Boston Mountains	13	9	85
Arkansas River Valley	10	13	103
Ouachita Mountains	6	15	128
Gulf Coastal Plains	14	31	123
Delta	36	28	390

*Site-Specific Stream Mineral WQS*

Revised APC&EC Rule 2.511(A) states that “Mineral quality shall not be altered by municipal, industrial, other waste discharges or instream activities so as to interfere with designated uses.” The site-specific WQS for chlorides, sulfates, and TDS can be based on the overall ecoregion value or developed using a background flow of four cubic feet per second for selected streams identified in APC&EC Rule 2.511(A). The state has site-specific mineral WQS for several waterways within the state; these are organized by ecoregion and can be found in APC&EC Rule 2.511(A).

A waterbody is considered for site-specific mineral WQS in accordance with APC&EC Rules 2.306 and 2.308 if the discharge has an instream concentration greater than 1/3 the specified ecoregion value for chlorides or sulfates, or if the concentration of either mineral is more than 15 mg/L, according to APC&EC Rule 2.511(B). Additionally, if the sum of the increases to chlorides and sulfates causes an exceedance in the ecoregion TDS values listed above, then site-specific criteria may be developed.

*Domestic Water Supply WQS*

Alternatively, the state may choose to apply the approved domestic supply criteria for chlorides, sulfates, or TDS if it is determined that the waterbody in question does not have or is not a candidate for development of site-specific mineral standards. APC&EC Rule 2.511(c) states that, “in no case should discharge cause concentration in any waterbody to exceed 250, 250 and 500 mg/L of chlorides, sulfides and TDS, respectively, except in accordance with Rules 2.306 and 2.308.”

For this PQR four permits were reviewed to determine if permit conditions and requirements were consistent with state and federal regulations. The reviewed permits are summarized in the table below.

**Table 7. Permits Reviewed for Implementation of Mineral Water Quality Standards**

NPDES Permit No.	Facility	Action	Issued Date	Expired Date
AR0021733	City of DeQueen	Reissue	March 16, 2020	March 31, 2025
AR0021601	City of Searcy	Reissue	June 12, 2019	April 30, 2024
AR0041734	Tyson Poultry-Nashville	Reissue	February 4, 2019	March 31, 2024
AR0033707	City of Tillar	Reissue	February 27, 2020	February 28, 2025

*Program Strengths*

The regulatory citations associated with permit conditions are well documented within the fact sheets or statements of basis. Permits and fact sheets are generally well organized and easy to follow. The reviewed permits include mineral limits based on EPA criteria, updated flow data, or methods found in EPA's TSD. Associated TMDLs as well as any permitting actions related to the TMDLs were documented in the fact sheets. In instances where the facility was determined to not be in compliance with state or federal water quality standards, DEQ provided an explanation of findings in the fact sheets and took appropriate action via permit conditions and compliance schedules to ensure the facility was brought into compliance.

*Areas for Improvement*

EPA recommends that sufficient justification and rationales be included in fact sheets documenting how revised limits are complying with the anti-backsliding exemptions listed at §402(o)(2) of the Clean Water Act. Any calculations or rationales based on scientific data should also be included.

*Action Items*

Essential	<ul style="list-style-type: none"> <li>•The PQR did not identify any essential action items for this section.</li> </ul>
Recommended	<ul style="list-style-type: none"> <li>•Include more detail regarding the justification and rationale regarding how revised criteria comply with anti-backsliding exemptions.</li> </ul>

## **B. Implementation of CWA Section 316(b) for Steam Electric Power Plant Permits**

*Background*

As a result of a 1995 consent decree and a settlement agreement with environmental groups, EPA, under the CWA, finalized and issued regulations to reduce injury and death to fish and other aquatic life caused by cooling water intake structures at existing power plants and manufacturing facilities. These facilities withdraw large volumes of water from waters of the U.S. to cool their processing units and machinery. However, these large withdrawals also remove billions of aquatic organisms from waters of the United States on a yearly basis. Most impacts are to early life stages of fish and shellfish and through impingement (being pinned against cooling water intake structure) and entrainment (being drawn into cooling water systems and affected by heat, chemicals, or physical stress).

CWA Section 316(b) requires NPDES permits for facilities that operate/own cooling water intake structures (CWISs) to include conditions that ensure the location, design construction, and capacity of these structures reflect the best technology available (BTA) in minimizing adverse environmental impact (AEI) to aquatic life.

For this PQR, permits subject to the 2014 rulemaking were reviewed. The final rule covers approximately 1,065 existing facilities, of which 544 are electric power generating plants and 521 are manufacturing facilities. The CWA section 316(b) Rule for Existing Facilities applies to point sources with a withdrawal design intake flow (DIF) of 2 MGD or greater and which use 25% of actual intake flow (AIF) of withdrawn water for cooling purposes. These requirements are cited at 40 CFR 122.21(r) (application requirements) and 125 Subpart J. Conditions of the rulemaking include, but are not limited to:

- No take of threatened or endangered species of fish or wildlife (40 CFR 125.98(j));
- BTA standards and interim requirements (40 CFR 125.94);
- Conditions, management practices and operational measures to comply with BTA (40 CFR 125.98(b)(2));
- Additional measures for fragile species and shellfish, if applicable (40 CFR 125.98(d));
- Compliance schedule as needed to implement the BTA (40 CFR 125.98(c)); and
- Monitoring (40 CFR 125.96) and reporting (40 CFR 125.97) requirements.

In the State of Arkansas, there are approximately 16 facilities that are subject to the Final 2014 316(b) Rule. For this PQR, four permits were reviewed to determine if permit conditions and requirements were consistent with the Final Rule. The table below lists permits reviewed and subject to the Final 2014 Rule for Existing Electric Generating Plants and Factories.

**Table 8. Permits Reviewed for Compliance with Final 2014 Rule**

NPDES Permit No.	Facility	Action	Issued Date	Expired Date
AR0036331	Entergy Arkansas	Modification	3/16/2020	2/28/2025
AR0001147	Entergy Arkansas	Reissue	8/26/2019	9/30/2024
AR0037842	SWEPCO Flint Creek Power Plant	Reissue	9/17/2020	10/31/2025
AR0037451	Entergy Arkansas	Reissue	9/22/2020	10/31/2025

### *Program Strengths*

Permit conditions and requirements for all permits reviewed were consistent with all the requirements of the Final 2014 rule for existing facilities. More specifically, all permits/fact sheet included the BTA determination, operation and maintenance requirements, and the appropriate monitoring and reporting requirements (i.e., monitoring for BTA determination, annual reports, weekly visual inspections, annual certification). To address possible impacts to any threatened and/or endangered species, draft permits were submitted to the field office of the U.S. Fish and Wildlife Service for review and comment prior to the public comment period (and in accordance with 40 CFR 125.98(j)). Fact sheets were well documented in providing the

appropriate regulatory citation that corresponds to the permit condition. Permit conditions were also consistent with the requirements documented in the fact sheet. The records were well formatted, facilitating the review process. In addition, application documents included, as appropriate, materials and information required by 40 CFR 122.21(r). Overall, EPA commends the DEQ in its administration of the 2014 Final Rule for Existing Electric Generating Plants and Factories in draft APDES permits/fact sheets.

*Areas for Improvement*

No areas for improvement were identified for this PQR.

*Action Items*

Essential	<ul style="list-style-type: none"> <li>•The PQR did not identify any essential action items for this section.</li> </ul>
Recommended	<ul style="list-style-type: none"> <li>•The PQR did not identify any recommended action items for this section.</li> </ul>

**VI. REVIEW OF PROGRESS ON ESSENTIAL ACTION ITEMS FROM LAST PQR**

Findings of essential action items from the last PQR on-site visit in November 2015 were not finalized. See section below for additional details.

**VII. RECOMMENDED ACTION ITEMS FROM LAST PQR**

EPA Region 6, in coordination with EPA’s Office of Wastewater Management (OWM), conducted an on-site PQR visit November 3-4, 2015. For this visit approximately 20 permits were reviewed (eight POTWs, nine non-POTWs, two stormwater general permits, and one non-stormwater general permits). However, an official report of findings was not finalized.

Even though EPA did not finalize an official report from the last PQR on-site visit, since 2012 EPA has been tracking and reporting to OWM the status of an item regarding DEQ’s formalization of antidegradation implementation in their CPP. In accordance with 40 CFR 130.5,

states are required to maintain a CPP and EPA is responsible for periodically reviewing the adequacy of the state's CPP. The most current CPP for DEQ is dated 2000. In addition, 40 CFR 131.12 (a) and (b) requires the state to develop and adopt a statewide antidegradation policy and to develop methods for implementing the antidegradation policy that are, at a minimum, consistent with the state's policy.

DEQ's antidegradation policy is established at APC&EC Rule 2. Permits that were reviewed during this PQR included an overall boiler plate language stating,

“The limitations and requirements set forth in this permit for discharge into Waters of the State are consistent with the Anti-degradation Policy and all other applicable water quality standards found in APC&EC Rule 2.”

DEQ has prepared a 2020 DRAFT CPP and Draft Antidegradation Implementation Methodology (AIM) and published the document for public comment July 26, 2020. The comment period was extended to October 2, 2020. The document was also submitted to EPA for review. EPA's final comments on the CPP and AIM were submitted to DEQ on October 02, 2020. EPA continues to work with DEQ in the review and approval of the 2020 DRAFT CPP and Draft AIM.

## VIII. ACTION ITEMS FROM FY 2018–2022 PQR CYCLE

This section provides a summary of the main findings of the PQR and provides proposed action items to improve Arkansas’s NPDES permit programs, as discussed throughout sections III, IV, and V of this report.

The proposed action items are divided into two categories to identify the priority that should be placed on each Item and facilitate discussions between Regions and states.

- **Essential Actions** - Proposed “Essential” action items address noncompliance with respect to a federal regulation. EPA has provided the citation for each Essential action item. The permitting authority is expected to address these action items in order to comply with federal regulations. As discussed earlier in the report, prior PQR reports identified these action items as Category 1. Essential actions are listed in Table 9 below.
- **Recommended Actions** - Proposed “Recommended” action items are recommendations to increase the effectiveness of the state’s or Region’s NPDES permit program. Prior reports identified these action items as Category 2 and 3. Recommended actions are listed in Table 10 below.

*The following tables summarize only those action items that were identified in Sections III, IV, and V of the report.*

**Table 9. Essential Action Items from FY 2018-2022 PQR Cycle**

Topic	Action(s)	Arkansas DEQ Response
Permit Application Requirements	Ensure that individual major municipal application forms comply with federal application requirements detailed in 40 CFR 122.21(j)(4) and (5).	<p>DEQ will be clarifying the application forms to require three separate sampling events to satisfy PPS requirements.</p> <p>DEQ will continue to confirm that the application includes the WET testing information as required by EPA Form 2A. DEQ will also continue as we have in the past with each permit renewal to review and confirm that all test results have previously been</p>

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		submitted and are maintained on file with DEQ. As we have in the past, we will continue to perform a full WET review of previous WET results and perform the analysis of reasonable potential.
TBELs for POTWs	DEQ must establish influent monitoring requirements for CBOD and TSS in order to demonstrate the permittee has achieved compliance with minimum percent removal requirements for these parameters established consistent with 40 CFR 133.102.	DEQ is updating DEQ's Form 1 to include influent sample results.
Reasonable Potential and Water Quality-Based Effluent Limitations	DEQ must establish WQBELs where data indicate that the permitted discharge causes, has the reasonable potential to cause, or contributes to an excursion above any State WQS, in accordance with 40 CFR 122.44(d)(1)(i) - (vii). If representative data show that an excursion of any criteria, including narrative WET criteria, has already occurred or indicates that the discharge has the reasonable potential to cause or contributes to an excursion, a limit must be included in the permit, even where the data set used in the reasonable potential analysis is limited or no data exists. If data are determined not to be or are no longer representative of the permitted discharge, then DEQ must document the basis for this determination in the fact sheet. DEQ should revise its CPP and/or water quality standards if needed, upon the next triennial review no later than 2024, to address these items.	DEQ is currently updating the CPP. In cases where there is limited and/or unreliable data, DEQ will continue to improve the explanation of data significance or reliability, and the reasons for sampling decisions. DEQ understands that permit limits are required when reasonable potential exists and will continue to impose permit limits when a complete and reliable reasonable potential analysis indicates the potential for exceedances.
Monitoring and Reporting Requirements	DEQ must ensure that permits establish monitoring requirements that demonstrate the permittee achieves compliance with all effluent limitations and	DEQ is developing procedures and revised forms to be considered during the renewal process. The

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	permit requirements in accordance with 40 CFR 122.44(i).	outcome of the review will guide decision making in renewal permits during the upcoming permit cycle.
Administrative Process	DEQ must include a general description of the sludge use and disposal practices in public notices for POTW permits, consistent with the requirements of 40 CFR 124.10(d)(1)(vii).	Sludge disposal in Arkansas is permitted through the State No-Discharge Program. The No-Discharge permits are renewed every five years and are announced through public notification procedures provided by APC&EC Regulation 8. These are the same procedures applicable to the NPDES program.

**Table 10. Recommended Action Items from FY 2018-2022 PQR Cycle**

Topic	Action(s)	Arkansas DEQ Response
Permit Application Requirements	For permits where permit development was delayed following application receipt, DEQ should consider providing a discussion in fact sheets that addresses the reason for the lapse in processing and explanation that the data are still representative of the discharge.	DEQ will expand the Fact Sheet as necessary, to include an explanation of lapsed time.
TBELs for POTWs	DEQ should include specific discussion of the basis for the removal of the influent monitoring requirements in the fact sheet.	DEQ is updating DEQ's Form 1 to include influent sample results. Procedures will be developed to evaluate the data during the draft permit review.
TBELs for Non-POTW Dischargers	DEQ should develop consistent discussions of non-municipal facility categorization with respect to the applicability of ELGs.	DEQ will continue to evaluate and improve template language in the areas regarding ELG standards to improve clarity and decision records, as necessary.
Reasonable Potential and Water Quality-Based Effluent Limitations	When evaluating RP with a small data set, DEQ should use the maximum reported effluent concentration, recommended by EPA's 1991 TSD, rather than using the geometric mean effluent value. For situations where only a small data set is available, DEQ may want to consider increasing the monitoring frequency in permits to provide additional and representative data (40 CFR Part 122.21(j)) for RP determinations in the next permit renewal.	
Final Effluent Limitations and Documentation of Effluent Limitations Development	DEQ should ensure that fact sheets consistently discuss the state's antidegradation requirements and how they are satisfied by the permit.	DEQ is currently developing an Antidegradation Implementation Methodology.
Standard and Special Conditions	DEQ should ensure that penalty amounts and language are consistent with federal requirements.	This suggestion is under consideration; however, revision to the standard language may introduce potential conflicts with Arkansas Code. DEQ is unaware of any past enforcement actions having ever conflicted with the provisions of 40 CFR 122.41 sections pertaining to

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		penalties. More details are necessary to develop specific language revision.
Administrative Record and Fact Sheet	DEQ should consider including the original basis for effluent limitations that are carried forward from the previous permit.	Based on this suggestion, DEQ will continue to evaluate and improve the justification language to improve clarity and decision records, as necessary.
Nutrients	<ul style="list-style-type: none"> <li>• Translate the narrative criteria at APC&amp;EC Rule 2.509 into a numeric criterion based on §304(a) criteria.</li> <li>• When nutrient limits are carried over or based on a previous permit consider including the original explanation of the limit.</li> </ul>	<p>When reliable data exists to develop and support defensible translators for any particular narrative criteria, DEQ understands the importance of a complete and thorough reasonable potential analysis. When necessary, permit limits will be developed to protect the beneficial uses of receiving streams. The Permits, Planning, and Compliance Branch will continue efforts to gather the water quality data necessary to develop future criteria or appropriate and defensible translators that are supported by scientifically acceptable methods.</p> <p>Based on the second suggestion, DEQ will continue to evaluate and improve the justification language to improve clarity and decision records, when necessary.</p>
Pretreatment: Food Processing Sector	The permit writer should ensure that all Industrial Users are properly identified in the POTW's application.	DEQ has now employed a new pretreatment coordinator. DEQ will be evaluating coordinator duties and program goals as we reorganize staff responsibilities.
Water Quality Standards for Minerals	Include more detail regarding the justification and rationale regarding how revised criteria comply with anti-backsliding exemptions.	DEQ will continue to evaluate and improve the justification language to improve clarity and decision records, as necessary.

**IX. APPENDIX****Table A1. Summary of Reviewed Permits for 2020 Arkansas Program and Permit Quality Review**

NPDES Permit No.	Name of Facility	Reissuance/Modification	Core Review				National Topics			Regional Topics	
			POTW	Non-POTW	Major	Minor	Nutrients	Pretreatment	MS4	316b	Minerals
AR0021601	City of Searcy	Modification	x		x			x			x
AR0020303	North Little Rock WW Utility-Faulkner Lake	Reissuance	x		x			x			
AR0021431	Dewitt Water Works	Reissuance	x			x					
AR0035386	FutureFuel Chemical Company	Reissuance		x	x						
AR0000591	Martin Operating Partnership	Reissuance		x	x						
AR0041734	Tyson Poultry	Reissuance		x		x					x
AR0038466	City of Hope	Reissuance	x		x						
AR0042951	City of Ashdown	Reissuance	x		x						
AR0033707	City of Tillar	Reissuance	x			x					x
AR0021733	City of DeQueen	Reissuance	x		x						x
AR0036331	Energy Arkansas	Modification								x	
AR0037842	SWEPSCO Flint Creek Power Plant	Reissuance								x	
AR0001147	Energy Arkansas	Reissuance								x	
AR0021741	Green Forest WWTP	Modification						x			
AR0020702	City of Batesville WWTP	Reissuance						x			
AR0049867	Bedford Falls Mobile Home Park LLC	Reissuance					x				
AR0021792	City of Berryville	Reissuance					x				
AR0003018	Tyson Poultry - Grannis	Modification					x				
AR0037451	Energy Arkansas	Reissuance								x	
AR0021768	City Corporation - Russellville Water and Sewer System	Reissuance					x				
ARR040000	Small MS4 GP	Reissuance							x		

## **Attachment A1. Permit Conditions for POTWs with Non-approved Pretreatment Programs**

### *Contributing Industries and Pretreatment Requirements*

- A. The following pollutants may not be introduced into the treatment facility:
- (1) Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit (°F) or 60 degrees Centigrade (°C) using the test methods specified in 40 CFR 261.21;
  - (2) Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0 s.u., unless the works is specifically designed to accommodate such discharges;
  - (3) Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference\* or Pass Through\*\*;
  - (4) Any pollutant, including oxygen demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which will cause Pass Through or Interference with the POTW;
  - (5) Heat in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 °C (104 °F) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits;
  - (6) Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;
  - (7) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
  - (8) Any trucked or hauled pollutants, except at discharge points designated by the POTW.
- B. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act (CWA), including any requirements established under 40 CFR Part 403.
- C. The permittee shall provide adequate notice to the Department of the following:
- (1) Any new introduction of pollutants into the treatment works from an indirect
-

discharger which would be subject to Sections 301 or 306 of the CWA if it were directly discharging those pollutants; and

- (2) Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Any notice shall include information on (i) the quality and quantity of effluent to be introduced into the treatment works, and (ii) any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

- According to 40 CFR 403.3(k), the term *Interference* means a Discharge which, alone or in conjunction with a discharge or discharges from other sources, both:
  - (1) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
  - (2) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the CWA, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.
- According to 40 CFR 403.3(p), the term *Pass Through* means a Discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

## **Attachment A2. Permit Conditions for POTWs with Approved Pretreatment Programs**

### *Contributing Industries and Pretreatment Requirements*

- A. The permittee shall operate an industrial pretreatment program in accordance with Section 402(b)(8) of the Clean Water Act (CWA), the General Pretreatment Regulations (40 CFR Part 403) and the approved POTW pretreatment program submitted by the permittee. The pretreatment program was originally approved on [Date], modified on [Date] and once again modified and approved on [Date] to be compliant with the October 2005 Streamlining revisions to the Federal Pretreatment Regulations in 40 CFR 403. The POTW pretreatment program is hereby incorporated by reference and shall be implemented in a manner consistent with the following requirements:
- (1) Industrial user information shall be updated at a frequency adequate to ensure that all IUs are properly characterized at all times;
  - (2) The frequency and nature of industrial user compliance monitoring activities by the permittee shall be commensurate with the character, consistency and volume of waste. The permittee must inspect and sample the effluent from each Significant Industrial User in accordance with 40 CFR 403.8(f)(2)(v). This is in addition to any industrial self-monitoring activities;
  - (3) The permittee shall enforce and obtain remedies for noncompliance by any industrial users with applicable pretreatment standards and requirements;
  - (4) The permittee shall control through permit, order, or similar means, the contribution to the POTW by each Industrial User to ensure compliance with applicable Pretreatment Standards and Requirements. In the case of Industrial Users identified as significant under 40 CFR 403.3(v), this control shall be achieved through individual control mechanisms, in accordance with 40 CFR 403.8(f)(1)(iii). Control mechanisms must be enforceable and contain, at a minimum, the following conditions:
    - a. Statement of duration (in no case more than five years);
    - b. Statement of non-transferability without, at a minimum, prior notification to the POTW and provision of a copy of the existing control mechanism to the new owner or operator;
    - c. Effluent limits, including Best Management Practices, based on applicable general Pretreatment Standards, categorical Pretreatment Standards, local limits, and State and local law;
    - d. Self-monitoring, sampling, reporting, notification and recordkeeping requirements, including an identification of the pollutants to be monitored

sampling location, sampling frequency, and sample type, based on the applicable general Pretreatment Standards in 40 CFR 403, categorical Pretreatment Standards, local limits, and State and local law;

- e. Statement of applicable civil and criminal penalties for violation of Pretreatment Standards and requirements, and any applicable compliance schedule. Such schedules may not extend the compliance date beyond federal deadlines; and
  - f. Requirements to control slug discharges, if determined by the POTW to be necessary.
- (5) The permittee shall evaluate, whether each Significant Industrial User needs a plan or other action to control slug discharges, in accordance with 40 CFR 403.8(f)(2)(vi);
- (6) The permittee shall provide adequate staff, equipment, and support capabilities to carry out all elements of the pretreatment program; and
- (7) The approved program shall not be modified by the permittee without the prior approval of the ADEQ.
- B. The permittee shall establish and enforce specific limits to implement the provisions of 40 CFR Parts 403.5(a) and (b), as required by 40 CFR Part 403.5(c). POTWs may develop Best Management Practices (BMPs) to implement paragraphs 40 CFR 403.5(c)(1) and (c)(2). Such BMPs shall be considered local limits and Pretreatment Standards. Each POTW with an approved pretreatment program shall continue to develop these limits as necessary and effectively enforce such limits.

The permittee shall submit, within sixty (60) days of the effective date of this permit, (1) a **WRITTEN CERTIFICATION** that a technical evaluation has demonstrated that the existing technically based local limits (TBLLs) are based on current state water quality standards and are adequate to prevent pass through of pollutants, inhibition of or interference with the treatment facility, worker health and safety problems, and sludge contamination, or (2) a **WRITTEN NOTIFICATION** that a technical evaluation revising the current TBLLs will be submitted within 12 months of the effective date of this permit.

All specific prohibitions or limits developed under this requirement are deemed to be conditions of this permit. The specific prohibitions set out in 40 CFR Part 403.5(b) shall be enforced by the permittee unless modified under this provision.

- C. The permittee shall analyze the treatment facility influent and effluent for the presence of the toxic pollutants listed in 40 CFR 122 Appendix D (NPDES Application Testing Requirements) Table II at least once per year and the toxic pollutants in Table III at least four (4) times per year (quarterly). If, based upon information available to the permittee, there is reason to suspect the presence of any toxic or hazardous pollutant listed in Table

V of 40 CFR 122 Appendix D, or any other pollutant, known or suspected to adversely affect treatment plant operation, receiving water quality, or solids disposal procedures, analysis for those pollutants shall be performed at least four (4) times per year (quarterly) on both the influent and the effluent.

The influent and effluent samples collected shall be composite samples, as defined in Part IV.8 of the permit. In accordance with 40 CFR 122.21(j)(4)(viii), where composite samples are inappropriate due to sampling, holding time or analytical constraints, at least four (4) grab samples shall be taken at equal intervals over a representative 24-hour period. Sampling and analytical procedures shall be in accordance with guidelines established in 40 CFR 136.

- D. The permittee shall prepare annually a list of Industrial Users which, during the preceding twelve months (the Pretreatment "Reporting Year") were in significant noncompliance with applicable pretreatment requirements. For the purposes of this Part, significant noncompliance shall be determined based upon the more stringent of either criteria established at 40 CFR Part 403.8(f)(2)(viii) or criteria established in the approved POTW pretreatment program. This list is to be published annually during the month of [Month] in the newspaper of general circulation that provides meaningful public notice within the jurisdiction(s) served by the POTW.

Note: For permittees with multiple NPDES permits, only one (1) updated pretreatment program status report ("Annual Report") is required. The annual report shall reference the Tracking NPDES Permit Number [AR00XXXXXX] for the permittee's approved Pretreatment Program.

In addition, by 4:30 P.M. Central Time (if electronically submitted) OR postmarked on or before the last business day in the month of [Month] the permittee shall submit an updated pretreatment program status report to the ADEQ containing the following information:

- (1) An updated list of all significant industrial users. The list must identify:
- a. Industrial Users classified as Non-Significant Categorical Industrial User (NSCIUs) or Middle Tier CIUs.
  - b. Industrial Users subject to categorical Pretreatment Standards that are subject to reduced monitoring and reporting requirements under 40 CFR 403.12(e)(2) and (3).
  - c. Industrial Users subject to the categorical Pretreatment Standards of the following Point Source Categories: Organic Chemicals, Plastics, and Synthetic Fibers [40 CFR Part 414], Petroleum Refining [40 CFR Part 419], and Pesticide Chemicals [40 CFR Part 455] and for which the Control Authority has chosen to use the

concentration-based standards rather than converting them to flow-based mass standards as allowed at 40 CFR 403.6(c)(6).

- d. Categorical Industrial Users subject to concentration-based standards for which the Control Authority has chosen to convert the concentration-based standards to equivalent mass limits, as allowed at 40 CFR 403.6(c)(5).
- e. General Control Mechanisms used for similar groups of SIUs along with the substantially similar types of operations and the types of wastes that are the same, for each separate General Control Mechanism, as allowed at 40 CFR 403.8(f)(1)(iii).
- f. Best Management Practices or Pollution Prevention alternatives required by a categorical Pretreatment Standard or as a local limit requirement that are implemented and documentation to demonstrate compliance, as required at 40 CFR 403.12(b), (e) and (h).

(2) For each industrial user listed the following information shall be included:

- a. Standard Industrial Classification (SIC) code, North American Industry Classification System (NAICS) code and categorical determination;
- b. Control document status, i.e., whether the user has an effective control document and the date such document was last issued, reissued or modified. Additionally, indicate which industrial users were added to the system, or newly identified, within the previous 12 months;
- c. A summary of all monitoring activities performed within the previous 12 months. The following information shall be reported:
  - i. total number of inspections performed;
  - ii. total number of sampling visits made;
- d. Status of compliance with both effluent limitations and reporting requirements. Compliance status shall be defined as follows:
  - i. Compliant (C) - no violations during the previous 12-month period;
  - ii. Non-compliant (NC) - one or more violations during the previous 12 months but does not meet the criteria for significantly noncompliant industrial users;
  - iii. Significant Noncompliance (SNC) - in accordance with requirements described in Item D above; and

- e. For significantly noncompliant industrial users, indicate the nature of the violations, the type and number of actions taken (notice of violation, administrative order, criminal or civil suit, fines or penalties collected, *etc.*) and current compliance status. If ANY industrial user was on a schedule to attain compliance with effluent limits, indicate the date the schedule was issued, and the date compliance is to be attained.
- (3) A list of all significant industrial users whose authorization to discharge was terminated or revoked during the preceding 12-month period and the reason for termination;
  - (4) A report on any interference, pass through, upset or POTW permit violations known or suspected to be caused by industrial contributors and actions taken by the permittee in response;
  - (5) The results of all influent and effluent analyses performed pursuant to Item C above;
  - (6) An influent/effluent summary chart containing the monthly average water quality-based effluent concentration demonstrating compliance with permit limits or the water quality levels not to exceed as developed in the permittee's approved technically based local limits document;
  - (7) The information requested may be submitted in tabular form as per the example tables provided for your convenience (See Attachments II, III and IV); and
  - (8) A copy of the newspaper publication of the significantly noncompliant industrial users giving the name of the newspaper and the date published.
- i. The permittee shall provide adequate notice of the following:

Any new introduction of pollutants into the treatment works from an indirect discharger that would be subject to Sections 301 and 306 of the CWA if it were directly discharging those pollutants; and

Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Adequate notice shall include information on (i) the quality and quantity of effluent to be introduced into the treatment works, and (ii) any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW